

Who Will Deploy WiMAX?

By Alan J. Weissberger, alan@viodi.com

Both WISPs and municipalities speaking at ISPCON made no mention of using Mobile WiMAX. Instead they are deploying outdoor WiFi/ mesh WiFi or proprietary broadband wireless technologies (primarily from Motorola) for wireless Internet access. Some are considering Fixed WiMAX for backhaul - from one or more Base Stations to the telco central office/ Point of Presence. But that backhaul is on a point to point wireless link - not the point to multipoint links being promoted by WiMAX pundits. None of the ISPCON participants were looking at mobile WiMAX to support mobility.

One big problem is that WiMAX is intended for licensed spectrum. In the U.S., the 3.5GHz band is allocated for military use, while SPRINT-Nextel holds most of the licenses for the 2.5GHz band. John Scrivner, President of Mt Vernon Net and the WISP Alliance (WISPA) says he would like to use an all IP carrier platform like WiMAX, but sees the lack of licensed spectrum as a huge obstacle. He states, "The lack of easy access to licensed spectrum is the "entire" problem."

The WISPs and municipalities that spoke at ISPCON use mostly unlicensed spectrum. While Scrivner has obtained a license in the AWS band, he is unsure of what broadband wireless data technology to deploy.

A recent [Network World](#) article confirms the slow road ahead for Mobile WiMAX (except for SPRINT or Clearwire).

It states: "So far, the limited U.S. deployments of WiMAX have been for the fixed version of the underlying IEEE standard 802.16d, mainly as carrier or wireless provider backhaul or Internet access services. With fixed WiMAX, stationary users link to a base station through a companion radio mounted outside a house or business, as an alternative to DSL or cable Internet access." But there's more about the uncertain state of Mobile WiMAX.....

But real-world data showing these mobile WiMAX statistics is missing. Sprint, for example, won't release details of field tests conducted over the past 12 months with its partners Intel, Motorola and Samsung. And technical and pricing concerns abound. As a result, many enterprise users are shelving consideration of mobile WiMAX for the time being.

Also at issue is how IEEE 802.16e's mobility requirements will affect how much data is transferable over the wireless connection. Initially, the IEEE estimated that mobile WiMAX would deliver 15% to 20% less bandwidth than fixed WiMAX. **"But now, we're seeing 30% to 35% less bandwidth available,"** says Greg Phillips CEO/CTO of AirTegrity Wireless.

Without knowing how much bandwidth mobile WiMAX will provide, enterprise network executives have a hard time assessing whether the technology would meet their application requirements better than offerings such as Wi-Fi and ever-improving cellular nets such as Code Division Multiple Access EV-DO Revision A or UMTS/HSPDA.

Yet there was one item of interest for WiMAX fans:

A Folsom, CA municipal wireless network trial will use WiMAX- but can you guess the reason why? Intel Corp is an anchor tenant in Folsom (with over 7,000 employees) and will be building and

installing the network at no cost to the city! What better showcase for WiMAX then in Intel's own backyard! This appears to be the only announced municipal wireless network trial/ deployment using WiMAX for subscriber access and it is Fixed WiMAX equipment that is being deployed.